Raytheon

Space and Airborne Systems
Electronic Warfare Systems

Contact Memory Button

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Topics to be Discussed

- **Potential Contact Memory Button Uses**
- **Contact Memory Button (CMB) Overview**
  - Hardware and Software requirements
  - External and Internal Interfaces
- **Raytheon's Material Management Information System (MMIS)**
  - Initialize and Create Data on CMB
- **WRA Life Cycle**
- **CMB Advantages**

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Potential Contact Memory Button Uses

- **Contact Memory Button supports two level maintenance approach**
  - Asset Level Tracking Throughout Maintenance Life Cycle
    - Organic activities utilize Serial Number Tracking System (SNTS)
    - Contractor utilizes contractor's asset tracking database
  - Attaches directly to the hardware
  - Suitable for use on a variety of platfo
    - Fixed Wing Fighters
    - Rotary Wing Fighters
    - Surface vehicles

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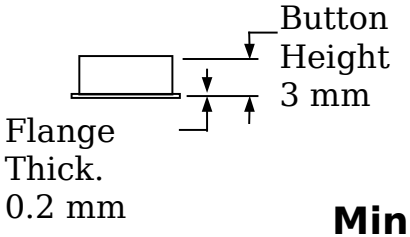
What is Contact Memory Button?

- **Contact Memory Button (CMB)**
  - Is a battery-free **Read/Write** electronic data storage device
  - Data can be stored and retrieved by momentary contact using a
  - It is permanently attached to the Weapon Replacement Assembly (WRA) and loaded with a specified set of data
    - The format of data has been established by the U.S. Navy's Serial Number Tracking (SNT) initiative
  - MiniButton™ by MacSema, Inc. has been selected
    - Part **#BMEWK8**
    - Cage Code: **03BF3**
    - Memory Capacity : **32K**
    - Dimensions:
      - Flange Dia: 14.3 mm
      - Flange Tick: 0.2 mm
      - Button Dia: 10.7 mm
      - Button Height: 3 mm



MiniButton™
Not Shown to Scale

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CMB Hardware Requirements

- **Required Hardware:**

Personal Computer (PC) **Contact Memory Button** **Button Read/Write Devices**

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CMB Software Requirements

- **Operating System:**
  - Raytheon's CMB client application can operate on the following operating systems:
    - Windows 98
    - Windows NT (Version 4 and above)
    - Windows 2000
    - Windows XP
- **Internet Web Browser:**
  - To support Raytheon's CMB Client Application
- **Navy's Serial Number Tracking System:**
  - To interface with the CMB

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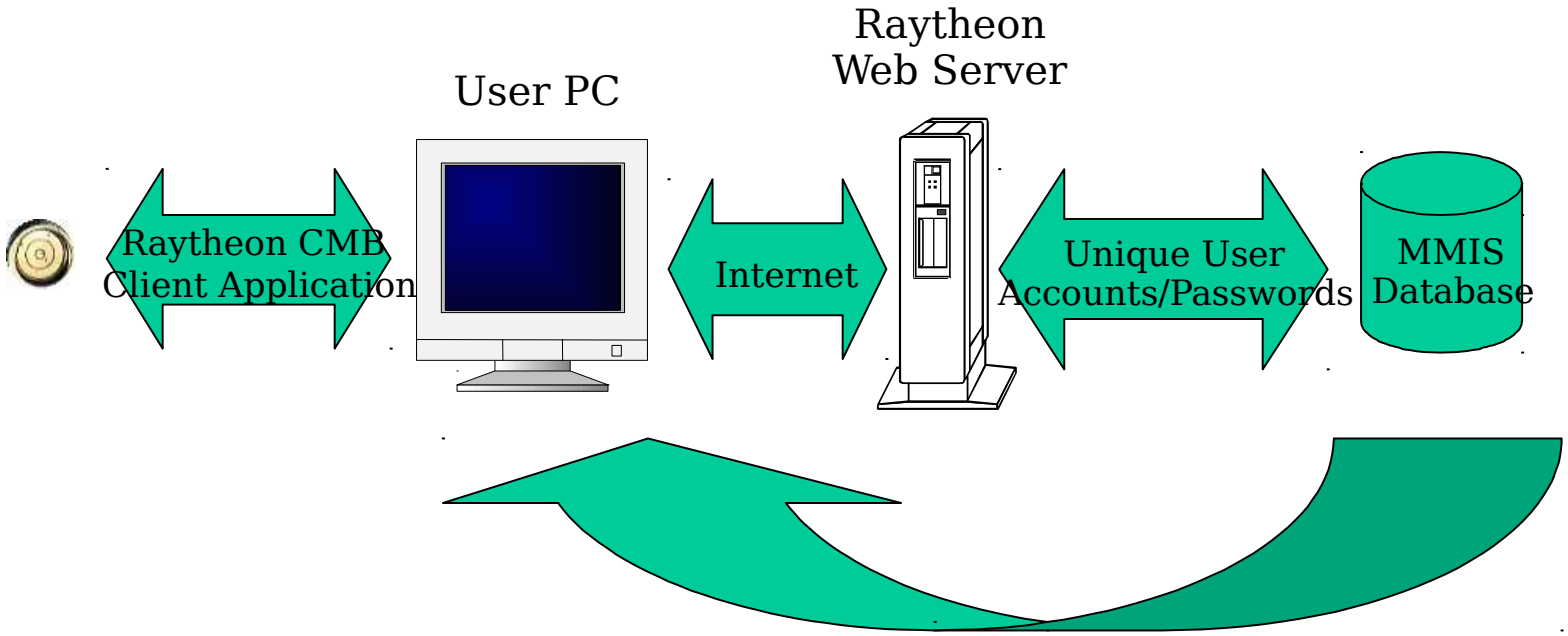
CMB External Interfaces

- **CMB is used to access and update data on two external systems:**
  - **Serial Number Tracking System (SNTS) -** Navy's SNTS utilizes the data on the CMB to interface and update the location of each WRA as it is moved from one location to the next
  - **Raytheon's Materials Management Information System (MMIS) -** MMIS has been developed by Raytheon to collect and report key data specific to each WRA.



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CMB Internal Interfaces

- **OEM's CMB application interfaces with Raytheon's MMIS via the internet**
  - **CMB to Reader –** Software drivers provided by the Original Equipment Manufacturer (OEM) facilitate exchange of data between the PC and the button
  - **CMB Reader to PC -** The CMB reader plugs into the serial port of the PC and OEM's software drivers support the interface between the PC and the reader
  - **CMB Application to Raytheon's MMIS –** OEM's CMB application interfaces with Raytheon's MMIS via the internet

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Material Management Information System (MMIS)

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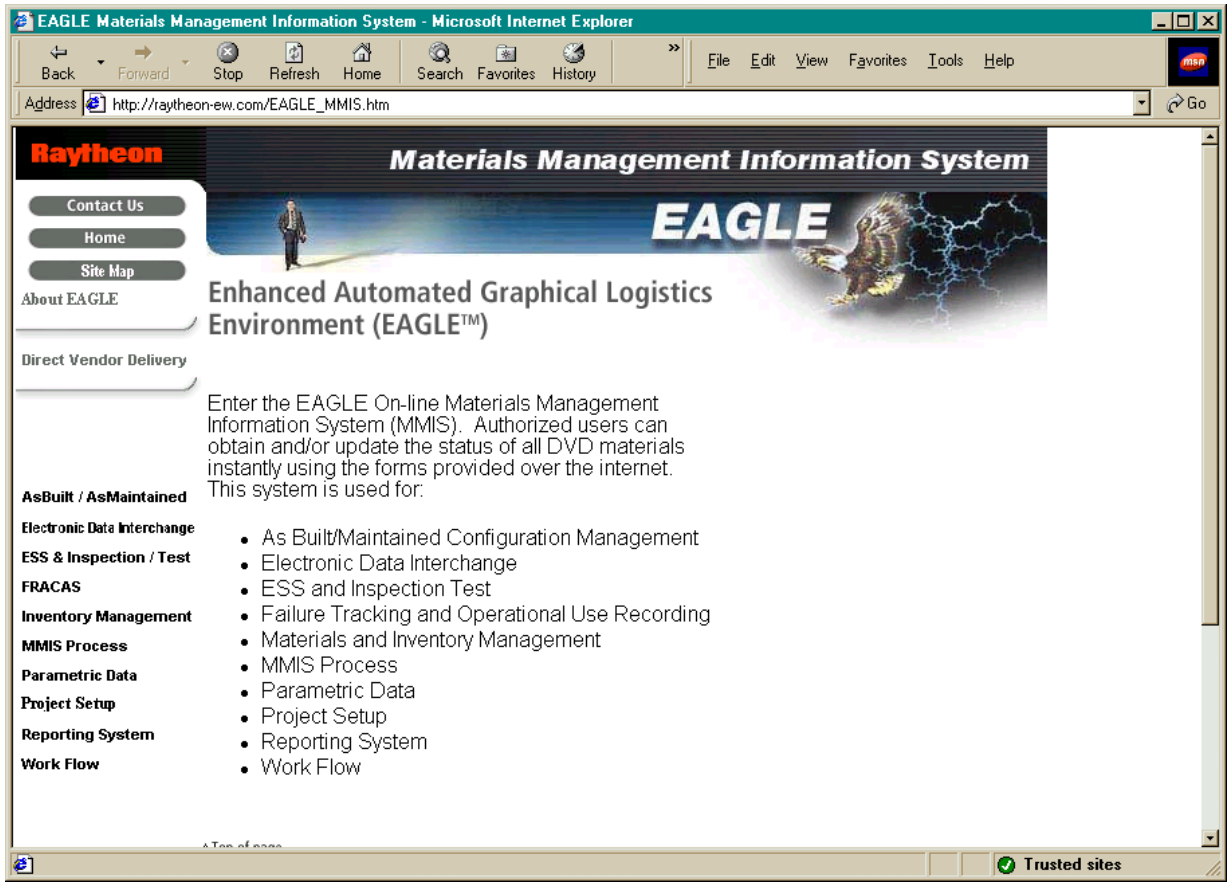
- MMIS provides status and history to authorized users for virtually all program data
- MMIS is accessible via connection to the Internet
- Access is controlled using userid's and passwords



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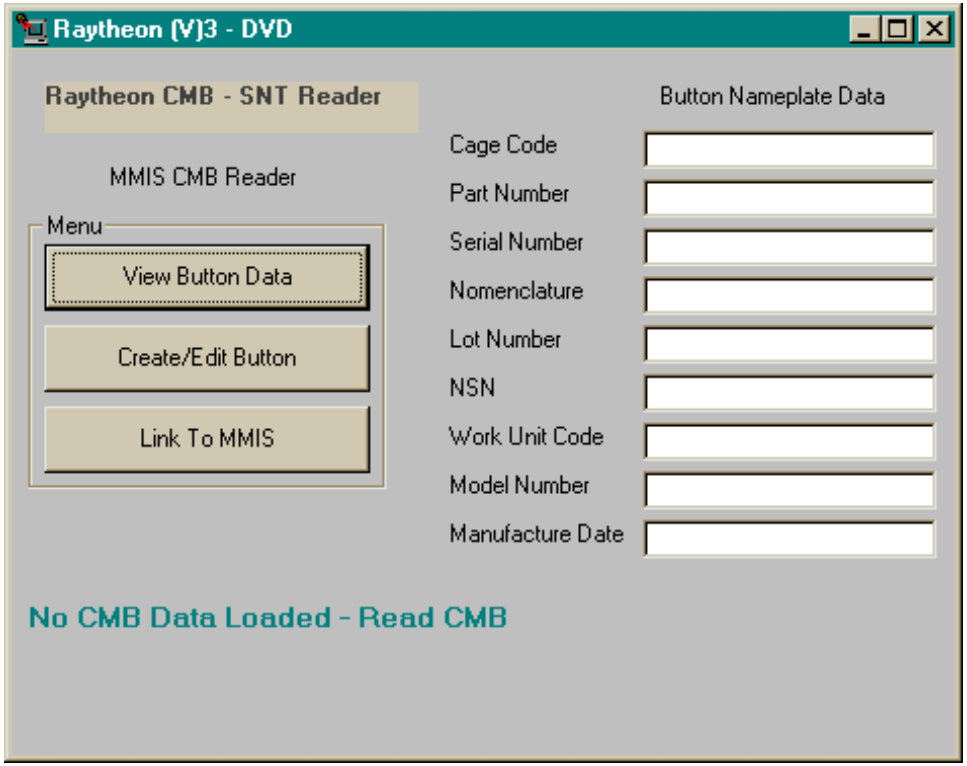
Raytheon's CMB – SNT Reader

- Raytheon's CMB interface is downloaded as a self-extracting, self-installing application
- Raytheon's CMB Interface gets started by selecting:

"Start Menu">>"Programs">>"MMIS CMB"

- User gets prompted to contact the CMB



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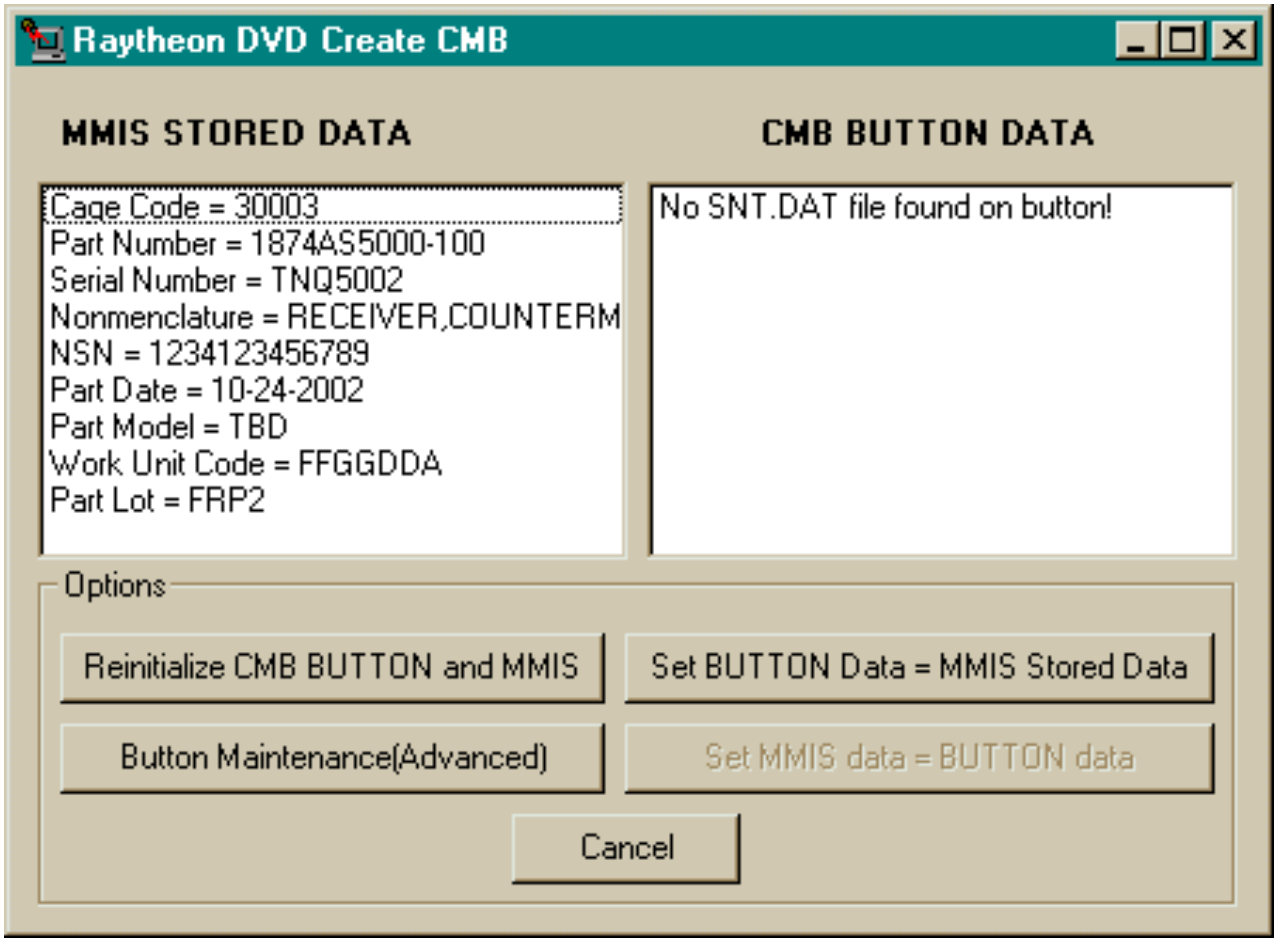
Create CMB Button Interface

- The probe should be placed firmly over the button and remain in contact until the following screen appears:



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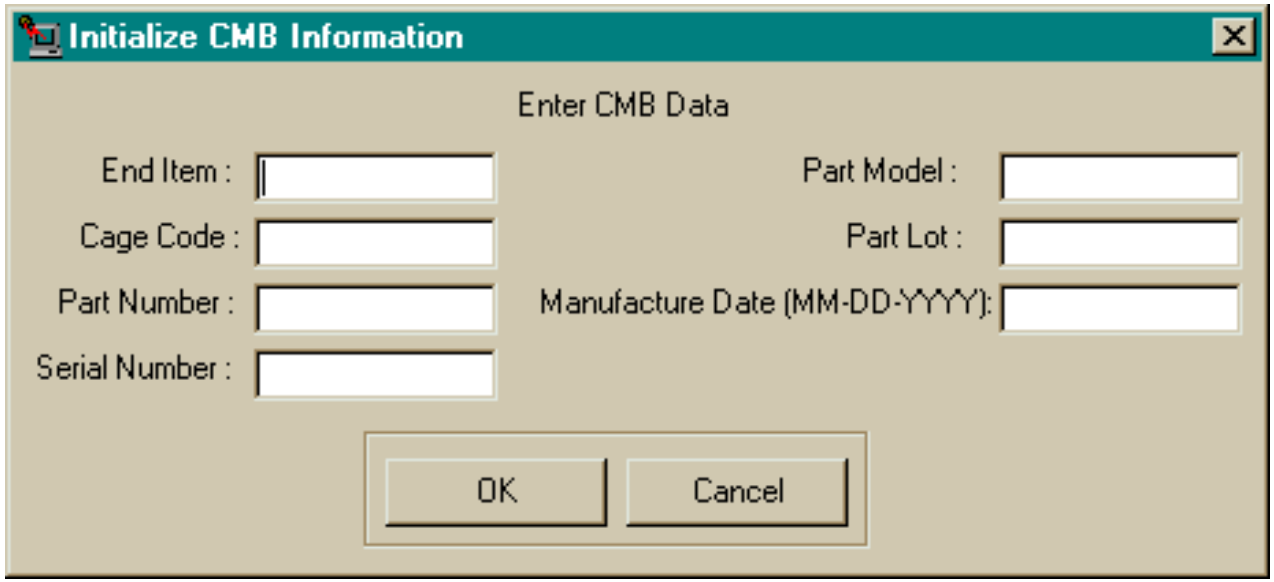
Initializing the CMB Button

Static Data Not changed through WRA Life Cycle

- **Data Resident on CMB:**
  - Part Number
  - Serial Number
  - CAGE Code
  - Nomenclature
  - Lot Number
  - Manufacturer Date
  - National Stock Number
  - Work Unit Code
- **Data Resident on Raytheon's MMIS:**
  - Shipping Data
    - carrier, Shipping tracking # and date.
  - Failure History
  - Repair History
  - As-Build Configuration
  - As-Maintained Configuration

Dynamic Data Updated through WRA Life Cycle



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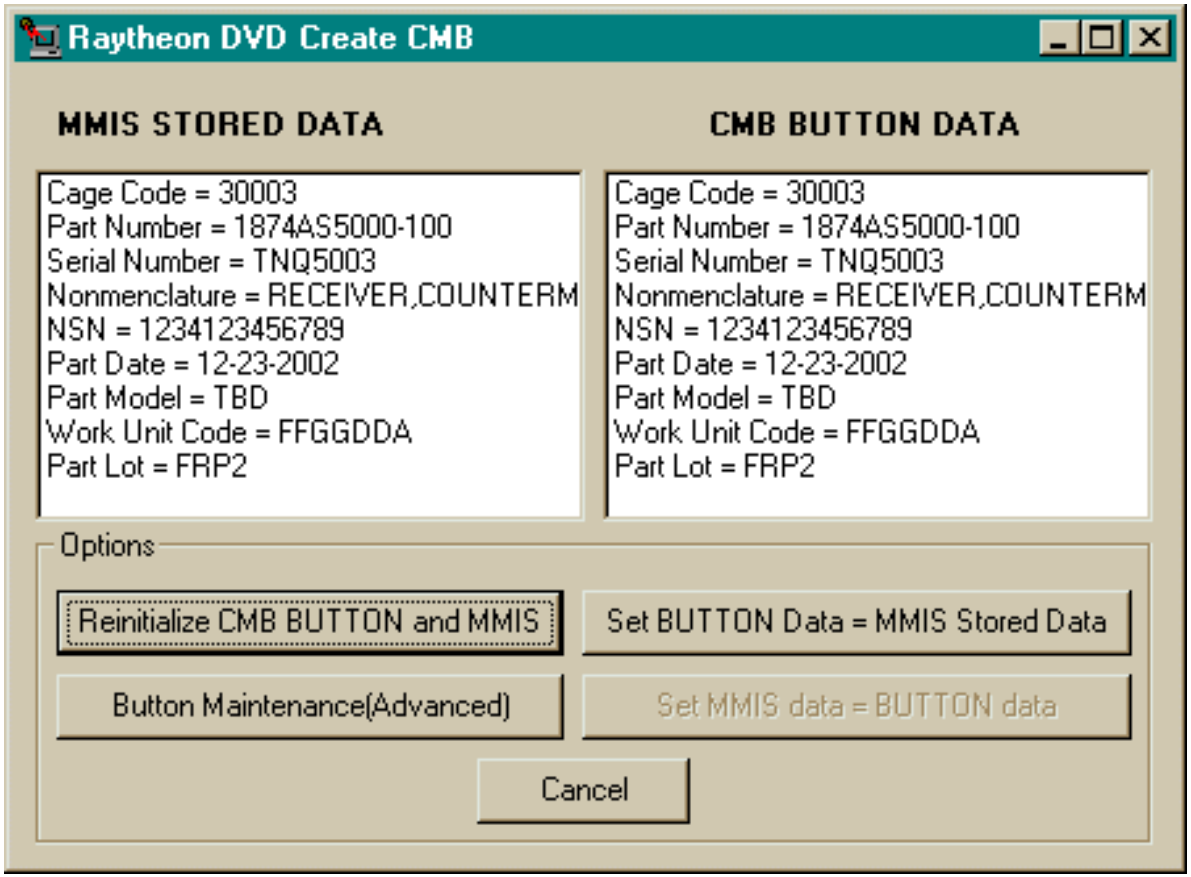
CMB Data Stored

- When all data fields have been entered correctly, a dialog box will open and prompt the user to contact the CMB.
- The probe should be placed firmly over the button and remain in contact until the following screen appears:



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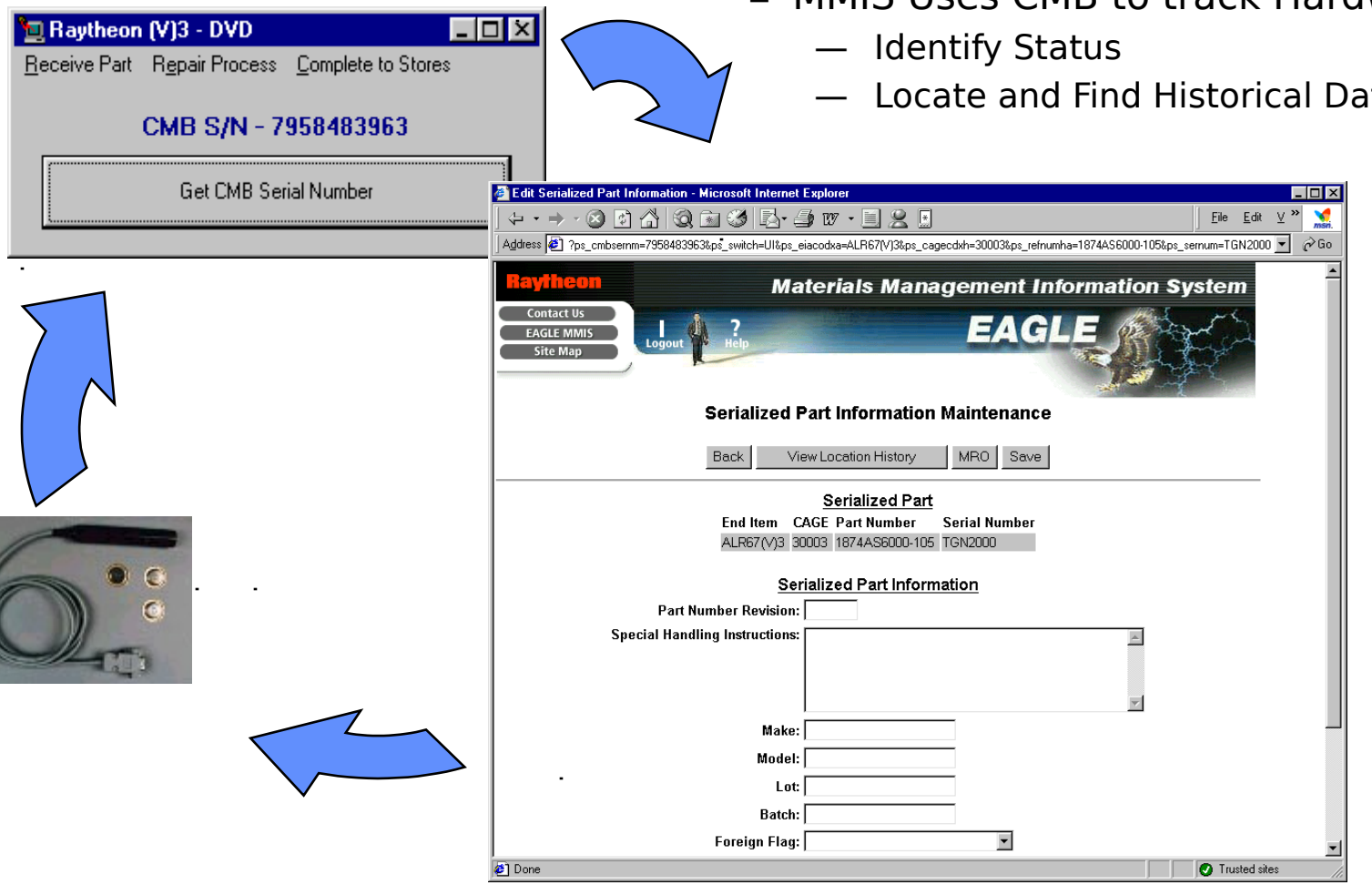
MMIS Tracks WRA Receive and Inductions through CMB Button

- MMIS Uses CMB to track Hardware
  - Identify Status
  - Locate and Find Historical Data



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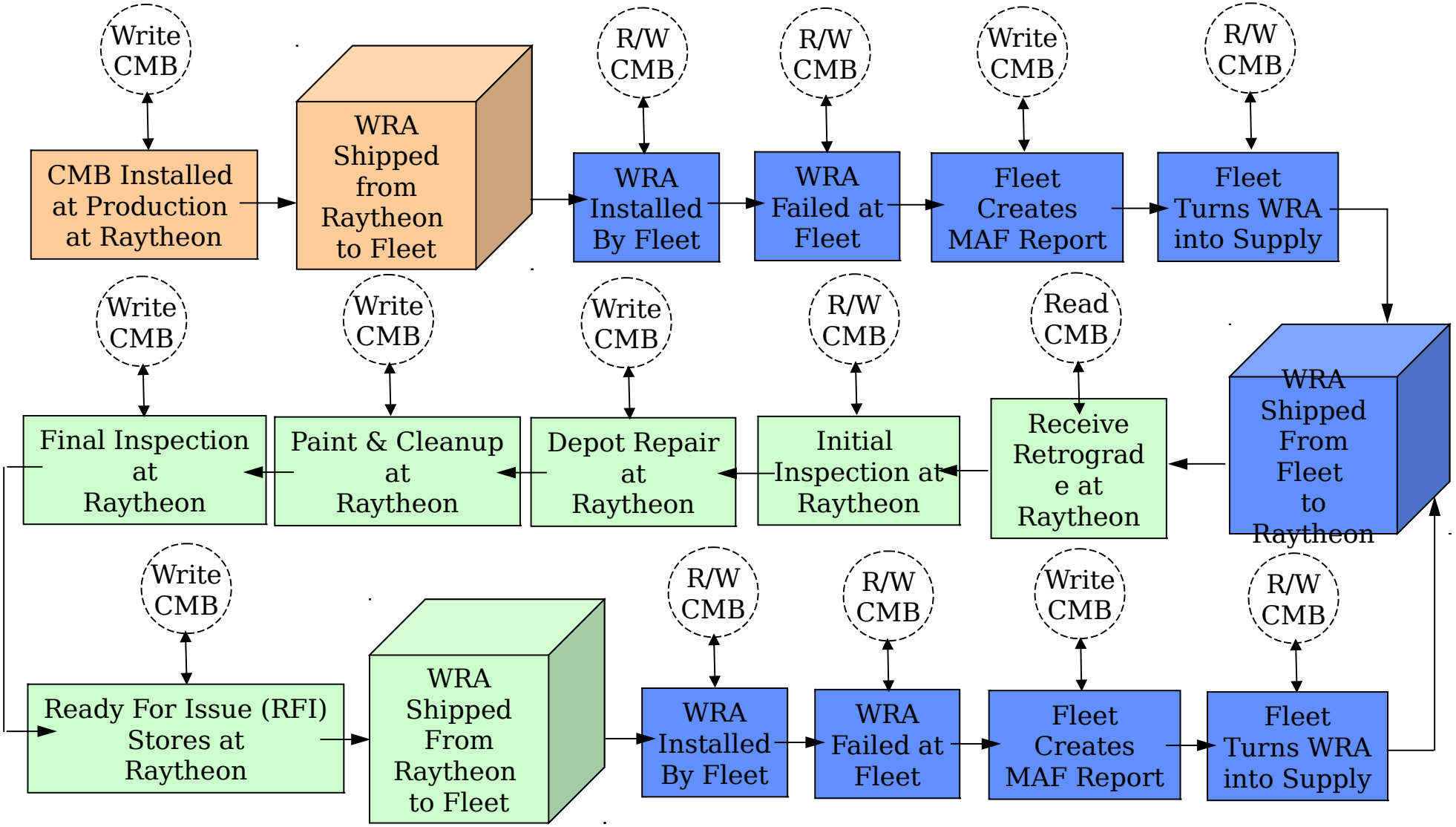
Weapon Replacement Assembly (WRA) Life Cycle



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Advantages

- **Record & track Who did What, When, and for How Long**
- **Quick access to accurate and comprehensive information and history throughout the life of the Item**
- **Reduce Manual Effort**
- **Reduce Human Error**
- **Data gathered can aid in Reliability, Maintainability and Supportability assessments**
- **Asset Visibility**

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